May 21, 2002

Mr. Scott Tomashefsky
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

Docket Number: 99-DIST-GEN-(2)
Environmental and Energy Infrastructure and Licensing Committee

Dear Mr. Tomashefsky:

Plug Power Inc. is a designer and developer of on-site, energy generation systems utilizing proton exchange membrane fuel cells for stationary applications. The Latham, New York-based company was founded in 1997 as a joint venture of DTE Energy Company and Mechanical Technology Incorporated. Plug Power's fuel cell systems for residential and small stationary commercial applications are expected to be sold globally through a joint venture with the General Electric Company and DTE. We appreciate the opportunity to provide comments on the Committee's diligent work to develop a strategic plan for distributed generation (DG). We are submitting these comments after your deadline, but hope you will accept them nonetheless.

The Committee has provided an excellent set of directions for government activity to help foster the development of DG in California. The draft Plan is most valuable in identifying legal, regulatory and institutional barriers to DG deployment, which today is the most daunting government-related challenge to DG developers. If this Plan can help encourage government to "get out of the way," you will have provided a major service to this industry and to California. The only significant element not addressed by the draft Plan is the vital role of government in helping enable the development and deployment of truly new technologies during the critical time preceding commercialization. Government, through such means as aggressive demonstration program sponsorship and research funding, plays a crucial role in the commercialization of this technology.

Our only concern with the draft Plan is the characterization of PEM fuel cell technology, the state of its cost competitiveness, and its stage of commercialization.

We notice that the draft Plan adopts information on fuel cell technologies from the California Power Authority website data reported by the companies who participated in the CPA's Request for Bid process. While we do not take issue with the CPA's decisions on qualifying bidders, we would like to point out that much of this data can be misleading if not understood in context. For example, the electrical efficiency numbers reported by certain companies, such as Plug Power, factor in all system operations, while other companies reported electrical efficiencies based on fuel cell stack performance only. This is not to suggest that the data is unreliable but simply that the reporting parameters

set by the Power Authority were general and subject to a variety of interpretation. Further, the Authority's economic viability analysis was focused solely on grid competitive applications. There are a myriad of potential applications for small PEM products in which the economics are more favorable.

Therefore, we would urge you to broaden your discussion of viability of fuel cell technologies beyond the process undertaken by the Power Authority. We believe the Commission would find the PEM technology held in great interest by developers, investors and potential customers.

In a similar vein, we are concerned that the Plan's citation of case studies from two companies that produce molten carbonate and phosphoric acid fuel cell technologies gives a misleading impression that there are no viable companies producing and deploying PEM fuel cell system. In fact, Plug Power has achieved significant development and deployment of its 5 kW PEM fuel cell system, which rivals the accomplishments of the companies cited in the Plan:

- During 2001, Plug Power delivered 131 5 kW systems that operate on natural gas and one 50kW prototype system that operates on hydrogen.
- During the fourth quarter of 2001 alone, a total of 81 fuel cell systems were delivered, including:
  - 50 systems to the Long Island Power Authority (LIPA), installed at a substation in West Babylon, New York, totaling 75 systems delivered to LIPA in 2001.
  - 21 systems to the New York State Energy Research and Development Authority (NYSERDA), installed at various sites around New York State as part of a 24-month program, totaling 44 systems delivered to NYSERDA in 2001.
  - Two 5kW CHP systems to Kubota Corporation in Japan, installed at Kubota's facilities in Amagasaki City.
  - One 50kW hydrogen-fueled system to Air Products and Chemicals, Inc. for installation in a hydrogen vehicle refueling station in Las Vegas, Nevada.
- In the first quarter of 2002, Plug Power:
  - Completed a follow-on contract with the Long Island Power Authority for the sale of 40 fuel cell systems, 17 combined heat and power systems which will be installed at LIPA customer sites on Long Island, and 3 hydrogen DC backup systems.
  - Delivered ten (5 kW) grid-parallel stationary units to the United States Army Corps of Engineers, Construction Engineering Research Laboratory at the Watervliet Arsenal, 1 system to Verizon, 1 system to Kubota Corporation for certification development in conjunction with the Japan Gas Association, and 1 system to the Houston Advanced Research Center.
  - Built 5 hydrogen DC backup power prototype and verification units and began initial verification and certification testing of 3 units.

Our point is that the PEM fuel cell technology, especially as being developed by Plug Power, is technically proven and on the verge of commercial viability. We ask that the Commission update the draft Strategic Plan to eliminate the dated and narrowly-focused conclusions of the Power Authority and reflect the actual experience in the marketplace.

Thank you again for the opportunity to comment on the Plan and especially for your commitment to fostering a successful DG industry in California.

Most cordially,

Loren Kaye
On behalf of Plug Power, Inc.